

IN THE CLAIMS

Please substitute the following amended claims 4, 11, and 22-23 for their corresponding originally-filed claims. A copy of these claims showing the amendments is attached as Appendix C.

a2
4. (Amended) A method for making a deep trench in a silicon layer, comprising:
providing a silicon layer;
providing a patterned mask over the silicon layer;
etching the silicon layer with a uniform plasma gas comprising a chlorine-containing gas, a passivating gas, a selectivity gas, and a diluent gas; and
removing the patterned mask.

a3
11. (Amended) A method for making a plurality of deep trenches in silicon layer, comprising:
providing a silicon layer;
providing a mask over the silicon layer;
etching the silicon layer with a gas mixture comprising a chlorine-containing gas to make a plurality of trenches; and
removing the patterned mask;
the plurality of trenches having a depth uniformity of less than about 2 %.

a4
22. (Amended) A method for making a semiconductor device containing a deep trench in a silicon layer, comprising:
providing a silicon layer;
providing a patterned mask over the silicon layer;

etching the silicon layer with a uniform plasma gas comprising a chlorine-containing gas, a passivating gas, a selectivity gas, and a diluent gas; and
removing the patterned mask.

23. (Amended) A method for making a semiconductor device containing a plurality of deep trenches in a silicon layer, comprising:

providing a silicon layer;
providing a mask over the silicon layer;
etching the silicon layer with a gas mixture comprising a chlorine-containing gas to make a plurality of trenches; and
removing the patterned mask;
the plurality of trenches having a depth uniformity of less than about 2 %.

Please add the following claims:

AS

- 52. The method of claim 12, wherein the depth uniformity is less than about 0.1%.
- 53. A method for making a plurality of trenches in a silicon layer, comprising:
 - providing a silicon layer;
 - providing a patterned mask over the silicon layer;
 - etching the silicon layer with a uniform plasma gas to make a plurality of trenches with a depth greater than about 1 micron and a depth uniformity of less than about 2%; and
 - removing the patterned mask.
- 54. The method of claim 53, wherein the depth ranges from about 1.25 to about 20 microns.
- 55. The method of claim 53, wherein the depth uniformity is less than about 0.5%.
- 56. The method of claim 53, wherein the variance in trench depth is less than about 500 angstroms.
- 57. The method of claim 53, wherein the plurality of trenches have a sidewall angle uniformity of less than about 0.5%.--